

REMARKS

Claims 1-15 and 19-23 are pending in this application. Several claims have been amended herein. Claims 5, 12, 13, 15, 22, and 23 have been withdrawn from consideration. Accordingly, claims 1-4, 6-11, 19, and 20 are before the Examiner.

Election/Restrictions

Applicants note with appreciation the examiner's acknowledgement of the election of group I, where $a = b = c = 1$. Applicants note that claim 21 has been withdrawn from consideration as part of group I since it is more properly placed in group III. Claims 5, 12, 13, 15, 22, and 23 have been withdrawn from consideration as drawn to non-elected invention. Applicants note the restriction is made final and respectfully reserve their right to petition the requirement.

35 U.S.C. § 112

First paragraph

Claim 19 stands rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the enablement requirement.

How to Make: The action alleges the specification is not enabling for making compounds where $a = b = c = 1$, i.e. octanes. The Action alleges that "the elected invention of substituted 1,4-diazabicyclo[3.2.1]octane compounds of formula (I), where a is 1, b is 1, and c is 1 of which the applicants have neither support or contemplated." The specification provides two schemes for making compounds in accordance with the invention. Notably, on pages 8 and 14, the schemes call for starting compound X, which is A-H. A is the moiety of formula II which, when $a = b = c = 1$, corresponds to the octane in question. The Action appears to focus on

several examples that are drawn to nonanes (a is 1, b is 2, c is 1), and concludes that octanes have no support. Applicants respectfully disagree.

When A is an octane, the schemes provided in the Specification fully enable octane compounds of the elected invention. As noted in the specification p. 20, lines 5-7, "Compounds of formula IX, X and XII, XIV, and XVII are either commercially available, known in the literature, or may be prepared by methods known to one skilled in the art." For example, Applicants submit herewith an article describing the preparation of 1,4-diazabicyclo[3.2.1]octane from 2-piperazin-2-yl-ethanol. (see P.A. Stern et al. (J. Med. Chem.) 20 (10), 1977, 1333-1337). Thus, those of skill in the art would be aware of methods for producing the starting material X, when X is A-H, where A is a 1,4-diazabicyclo[3.2.1]octane as set forth herein. Thus, the specification is enabling with respect to how to make compounds of formula (I) where a is 1, b is 1, and c is 1.

How to Use: The rejection appears to be directed at the inclusion of the phrase "human disease or conditions in which activation of the $\alpha 7$ nicotinic receptor is beneficial." Although Applicants believe this phrase is adequately described, we have deleted it from the claims as an administrative expedient.

The rejection appears further to be directed to the use of "prophylaxis." In an effort to advance prosecution, Applicants have deleted the term from the claim.

Applicants respectfully submit that claim 19 now satisfies all requirements of 35 U.S.C. § 112.

Second paragraph

Claims 1-4, 6-11, 14, 19, and 20 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite.

Claim 1 and its dependent claims stand rejected as allegedly vague and indefinite, due to lack of clarity around the moiety $\text{CF}_3 \text{NR}^1\text{R}^2$ in the definition of Ar^1 and Ar^2 . Applicants respectfully submit that this is a typographical error and should in fact read " $\text{CF}_3, \text{NR}^1\text{R}^2$ " – the

comma was inadvertently omitted. Correction has been made by amendment to the claims and specification. Support for the change is found on p. 3, where the CF_3 and NR^1R^2 are separated.

Claim 11 is rejected for allegedly lack of antecedent basis for “ OR^3 and CH_2OR^3 ”.

Applicants again respectfully assert that this is a typographical error, and R^3 in each occurrence should be R^2 , as seen in the independent claim.

Similarly, in claim 14, OR^1 and CH_2OR^1 should read OR^2 and CH_2OR^2 .

Applicants respectfully submit that all claims now satisfy the requirements of 35 U.S.C. § 112. Withdrawal of the rejection based thereon is respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1-3, 6-11, 19, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Peters et al. US patent application publication 2006/0148789. Applicants respectfully submit that the rejection should be withdrawn, since Peters ‘789 is not available as prior art to the present application.

Peters ‘789 was filed as a PCT application on February 4, 2004 claiming priority to 2 US provisional applications and 2 foreign patent applications. The earliest priority date claimed is February 27, 2003. Peters ‘789 was published on July 6, 2006. Since the publication date of Peters ‘789 is after Applicants’ filing date, Peters ‘789 is not available as prior art under either 102(a) or 102(b). Furthermore, Peters ‘789 is not available as prior art, because Applicants priority date, August 14, 2002, predates even the earliest priority date of Peters ‘789. Applicants respectfully request withdrawal of the rejection, since Peter ‘789 is not available as prior art.

Double Patenting

Claims 1-4, 6-11, 14, 19 and 20 stand provisionally rejected for obviousness type double patenting over claims 1, 2, 4, 5, 7, 8, 13, and 14 of co-pending application no 10/524,482.

Claims 1-4, 6-11, 14, 19 and 20 stand provisionally rejected for obviousness type double patenting over claims 1, 2, 4, 5, 7, 8, 13, and 14 of co-pending application no 10/283,576.

Applicants respectfully request that these rejections be held in abeyance until the present claims are otherwise indicated as allowable. At that time, Applicants will consider the filing of a terminal disclaimer, if necessary.

The Commissioner is hereby authorized to charge any fee or underpayment thereof or credit any overpayment to Deposit Account No. 26-0166.

Early reconsideration and allowance of all pending claims is respectfully requested. The examiner is requested to contact the undersigned attorney if an interview, telephonic or personal, would facilitate allowance of the claims.

Respectfully submitted,
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